

开关型磁阻电机调速系统(SRD)微机控制的实现

Realization of Microcomputer Control of Switched Reluctance Drive(SRD) System

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英文关键词: SRD; switched reluctance motor; micro computer control; drive system.

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作者	单位
赵立新	山东农业大学
丁筱玲	山东农业大学
王凤荣	泰安缆丝厂
王计元	山东农业大学

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中文摘要:

提出了一种新型开关磁阻电动机驱动系统的微机控制技术。该技术兼有异步电动机变频调速系统和直流电动机调速系统的优点,运用它可对大小功率各类电动机实现高可靠性的平滑调速。简单介绍了各组成部分的工作原理、控制系统的硬件实现方法和软件流程。由于该系统以8098单片机为控制核心,结构简单、控制灵活,并有故障诊断和保护功能,且整机调速精度高,动态响应速度快;因此,是一种具有很强竞争力的变速驱动系统。

英文摘要:

One new microcomputer control technique used on switched reluctance motor driving system is put forward. The technique has speed-adjusted advantages of both frequency-changed asynchronous motor and direct current motor. Using it we can adjust the speed for all of the different power motors in high-dependence and level-smooth methods. The principle of operation of every part and the methods of hardware design and software flow about the control system are simply introduced in this paper. The controlling core of the system is a single-chip computer of 8098, it has simple structure, nimble-controlling hitch-diagnosed and protection strong points. The whole system speed can be adjusted at a high accuracy, and it has a rapid move-state response, so not only at present but also in the future, the system will be a very strong speed-adjusted driving system.

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